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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/691,062	10/22/2003	Rainer Bottesch	SCH-00076	6104

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EXAMINER

HAN, JASON

ART UNIT PAPER NUMBER

2875

DATE MAILED: 05/23/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/691,062	BOTTESCH ET AL.	
	Examiner	Art Unit	
	Jason M. Han	2875	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 May 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 3-27 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 and 3-27 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 January 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|-----------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments, see Pages 7-13, filed May 9, 2005, with respect to the rejections of Claims 1 and 3-6 under 35 U.S.C. 102(b) and Claims 1 and 7-27 under 35 U.S.C. 103(a) have been fully considered and are persuasive. Therefore, the Final Rejection has been withdrawn, and the Amendment, filed May 9, 2005, has been entered. However, upon further consideration, a new ground(s) of rejection is made in view of Ewald (U.S. Patent 4628422), West et al. (U.S. Patent 6598998), Desai (U.S. Patent 6773154), and Schöniger et al. (U.S. Patent 5136483).

Claim Objections

2. Claim 1 is objected to because of the following informalities: Applicant recites an "LED" defined with a conducting element, which is considered a misnomer, whereby one ordinarily skilled in the art would refer to an "LED" as a diode with a protective dome as shown in applicant's figures. Applicant is advised to rewrite the structure to read "LED lamp", "LED package", or "LED in combination with a conducting element". Appropriate correction is required.
3. Claim 6 is objected to because of the following informalities: Applicant should refrain from the use of pronouns (e.g., "its"). Appropriate correction is required.
4. Claim 14 is objected to because of the following informalities: Applicant should refrain from the use of pronouns (e.g., "their"). Appropriate correction is required.

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5. Claims 18 and 22 are objected to because of the following informalities:

Typographical error – “light conducting element” should read as “light-conducting element”. Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 15-23 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Applicant has interchangeably defined an annular reflector and light-conducting element. It remains unclear to the examiner which element the applicant is referring to in light of the specification, wherein the applicant cites a light-conducting element and a conducting element. Further elucidation is required, whereby the applicant should structurally distinguish between the LED (defined as including the conducting element), light-conducting element (annular reflector surrounding the conducting element of Paragraph 15 in the specification), and the conducting element (Paragraph 15). The below rejections have been based on the best-deemed interpretation as broadly construed [MPEP 2111] by the examiner.

7. Claims 19-20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Applicant cites the annular reflector being located behind the light-conducting element in beam direction within Claim 18, of which Claims 19-20 are dependent upon. It is unclear how “the rays reflected by the annular reflector

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enter the light-conducting element" (Claim 19) or "the light rays from the annular reflector impinge perpendicularly on the underside of the light-conducting element" (Claim 20). At present, the claimed apparatus could not be distinguished with respect to which component the light beam strikes first and remains indefinite in structure.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. Claims 1 and 3-6 are rejected under 35 U.S.C. 102(b) as being anticipated by Ewald (U.S. Patent 4628422).
9. With regards to Claim 1, Ewald discloses a lamp including:
 - A housing [Figure 2: (8)] in which at least one light source [Figure 1: (1)] is arranged, wherein the at least one light source is an LED emitting light laterally from the LED; and
 - At least one reflection part [Figure 1: (5)] associated with the light source, wherein the at least one reflection part adjoins and surrounds the LED in the same plane and has a height that is less than or equal to the LED.
10. With regards to Claim 3, Ewald discloses the reflection part including an annular reflector [Figures 1-2: (5)].
11. With regards to Claim 4, Ewald discloses the reflector including a parabolic configuration [Figure 1: (5)].

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12. With regards to Claim 5, Ewald discloses the LED [Figure 1: (1)] being arranged at the focus of the reflector [Figure 1: (5)].

13. With regards to Claim 6, Ewald discloses the reflector being provided with optics [Figure 1: (4)] at a surface of said reflector.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

14. Claims 1, 7-18, 21-23, and 26-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over West et al. (U.S. Patent 6598998) in view of Desai (U.S. Patent 6773154).

15. With regards to Claim 1, West discloses a lamp including:

- At least one light source [Figure 12: (40)], wherein said light source is an LED package emitting light laterally; and
- At least one reflection part [Figure 12: (102)] associated with the light source, wherein the at least one reflection part adjoins and surrounds the LED package in the same plane and has a height that is less than or equal to the LED package.

West does not specifically teach the at least one light source being arranged within a housing.

Desai teaches a laterally emitting LED lamp [Figure 1: (110)] that is arranged within a housing [Figure 1: between (109a) and (109b)].

It would have been obvious to one ordinarily skilled in the art at the time of invention to modify the lamp of West to incorporate the housing of Desai in order to facilitate support, protection, and easy installation [i.e., within an automobile] for the lamp.

16. With regards to Claim 7, West in view of Desai discloses the claimed invention as cited above. In addition, West teaches the reflection part including a light-conducting element [Figure 12: (102)].

17. With regards to Claim 8, West in view of Desai discloses the claimed invention as cited above. In addition, West teaches the light-conducting element having a circular outline and at least one light exit side [Figure 12: as defined by the edges of (102)].

18. With regards to Claim 9, West in view of Desai discloses the claimed invention as cited above. In addition, West teaches the light-conducting element including a central aperture in which the LED is located [Figure 12: (40)].

19. With regard to Claims 10-12, West in of Desai discloses the claimed invention as cited above, and West does not specifically teach the light-conducting element including reflection surfaces reflecting the light emitted by the LED to a light exit surface (re: Claim 10), said reflection surfaces being provided coaxial to the LED (re: Claim 11), nor teaches said reflection surfaces being provided on an underside of the light-conducting element on a side opposite of the light exit surface (re: Claim 12).

However, Desai teaches a light-conducting element [Figure 3: (106)] with reflection surfaces [Figure 3: (108)] provided coaxially to the LED lamp and on an underside of the light-conducting element on a side opposite a light exit surface [Figure 3: (102)].

It would have been obvious to one ordinarily skilled in the art at the time of invention to modify the lamp of West to incorporate the light-conducting element with multiple reflection surfaces of Desai in order to provide a desired optical effect on the illumination. In this case, multiple reflection surfaces could provide a greater uniform distribution of the light and collimate the illumination towards a desired direction.

20. With regards to Claim 13, West in view of Desai discloses the claimed invention as cited above. In addition, West teaches the outside of the light-conducting element being provided with at least one reflection layer [Figure 12: (120)], applied by vapor deposition [Column 7, Lines 23-27].

21. With regard to Claims 14-17, West in view of Desai discloses the claimed invention as cited above, wherein West does not specifically teach at least two reflection parts being arranged closely spaced with one behind another in the beam direction of the LEDs (re: Claim 14), the one reflection part including an annular reflector and the other part including a light-conducting element (re: Claim 15), said annular reflector being located ahead of the light-conducting element in beam direction (re: Claim 16), nor teaches the annular reflector including a passage opening to admit the rays of light to the light-conducting element (re: Claim 17).

However, Desai teaches at least two reflection parts including an annular reflector [Figure 3: (106)] arranged ahead of a light-conducting element [Figure 3: (102)] in beam direction, wherein the annular reflector includes a passage opening to admit the rays of light to the light-conducting element.

It would have been obvious to one ordinarily skilled in the art at the time of invention to modify the lamp of West to incorporate the annular reflector and light-conducting element of Desai to provide a desired optical effect with respect to the illumination, whereby multiple optical components offer greater flexibility than a single optical component.

22. With regards to Claim 18, West in view of Desai discloses the claimed invention as cited above. In addition, West teaches an annular reflector [Figure 12: (102)] being located behind a light-conducting element [Figure 12: (144)] in beam direction and light emitted from an LED in front of said light-conducting element and contacts said annular reflector, and light emitted from an LED positioned between the annular reflector and behind said light-conducting element contacts said annular reflector.

23. With regard to Claims 21-23, West in view of Desai discloses the claimed invention as cited above, wherein West does not specifically teach at least two light-conducting elements arranged one behind the other in beam direction (re: Claim 21), two or more reflection surfaces configured in the anterior light-conducting element so that the rays of light reflected from the rearward light-conducting element enter the anterior light-conducting element in the region between the two or more reflection surfaces (re: Claim 22), nor teaches the light rays of the rearward light-conducting

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element impinging perpendicularly on the underside of the anterior light-conducting element (re: Claim 23).

However, Desai teaches at least two light-conducting elements including an anterior one [Figure 1: (102)] having two or more reflection surfaces [Figure 1: (104)] arranged ahead of the rearward one [Figure 1: (106)], whereby rays of light reflect off the rearward light-conducting element and enter/impinge perpendicularly on the underside of the anterior light-conducting element in the region between the two or more reflection surfaces.

It would have been obvious to one ordinarily skilled in the art at the time of invention to modify the lamp of West to incorporate the annular reflector and light-conducting element of Desai to provide a desired optical effect with respect to the illumination, whereby multiple optical components offer greater flexibility than a single optical component.

24. With regard to Claims 26-27, West in view of Desai discloses the claimed invention as cited above, wherein West does not specifically teach the LEDs of the reflection parts arranged one behind another emitting the same (re: Claim 26) or different (re: Claim 27) chromatic hues.

However, Desai teaches, "A typical LED lamp provides an intense beam of colored light [Column 1, Lines 48-49]."

It would have been obvious to one ordinarily skilled in the art at the time of invention to modify the lamp of West to incorporate the teaching of Desai, wherein an LED lamp(s) could be used to produce different or same colored hues.

25. Claims 24-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over West et al. (U.S. Patent 6598998) in view of Desai (U.S. Patent 6773154) as applied to Claim 1 above, and further in view of Schöniger et al. (U.S. Patent 5136483).

West in view of Desai discloses the claimed invention as cited above, but does not specifically teach the reflection part having a cooling member located on the underside thereof (re: Claim 24), nor said cooling member at least partially covering the underside of the reflection part (re: Claim 25).

Schöniger discloses a reflector [Figure 3: (16)] with cooling members located on and partially covering the underside thereof [Figure 3: (19)].

It would have been obvious to one ordinarily skilled in the art at the time of invention to modify the reflection part of West in view of Desai to incorporate the cooling members of Schöniger to ensure proper heat dissipation for the LED and thereby illumination efficiency.

Conclusion


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason M. Han whose telephone number is (571) 272-2207. The examiner can normally be reached on 8:00am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sandra O'Shea can be reached on (571) 272-2378. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JMH (5/20/2005)


Stephen Husar
Primary Examiner